# Section II

## Project Description

Assembly Bill 2193 (AB 2193, Rainey, signed September 23, 1996, became law January 1, 1997) designated the DBW the lead agency to develop a control program for the aquatic weed *Egeria densa* in the Sacramento-San Joaquin Delta, its tributaries, and the Suisun Marsh. In response to this legislation, the DBW is proposing to control Egeria in the Delta using the EDCP, and to conduct research trials over a two-year period using the aquatic herbicide Komeen (Two-Year Komeen Trials). The DBW completed a final EIR that fully discloses the potential environmental impacts of the EDCP and Two-Year Komeen Trials.

*Egeria densa* (*Egeria*, also known as Brazilian Elodea) is a non-native submerged aquatic weed that grows throughout the Delta. The plant is considered native to Southeast Brazil. *Egeria* has few natural predators because it was introduced from Brazil disease and insect-free. Spread of *Egeria* outside its native range has been attributed to the fact that it was once considered an important "oxygenator" for ponds and aquaria and thus became widely available as an aquarium plant.

*Egeria's* small leaves are strap-shaped, about one inch long and ¼ inch wide. The leaf margins have very fine saw teeth that require a magnifying lens to see. *Egeria* has dense whorls of three to six bright green leaves arranged around the stem. Flowers are on short stalks about one inch above the water. Flowers have white petals and are about ¾ inch across. Most of *Egeria's* biomass is produced near the water surface. *Egeria* can grow to a depth of approximately three meters.

*Egeria* reproduces asexually, or vegetatively, through fragmentation. In this process, severed plant fragments regenerate into new plants capable of establishing themselves at new locations. Part of the widespread success of the plant in the Delta is due to its ability to reproduce in this manner.

*Egeria* has spread uncontrolled since it was first introduced to the Delta several decades ago. *Egeria* may have spread to the Delta when an aquarium was dumped or when a boater carried it from an infested area. Factors that have caused it to spread through the Delta include ideal weather and hydrologic conditions and the lack of natural controls (e.g., competing species, herbivores, and pathogens). *Egeria* appears to grow in spurts with the fastest growth likely occurring during periods of drought in the summer.

Dense mats of *Egeria* that form in the Delta are a hazard and nuisance because they can:

- Eliminate or hinder boat and vessel navigation
- Disrupt recreational activities such as water skiing, fishing, and swimming
- Clog agricultural irrigation intakes
- Slow water conveyance, requiring increased energy costs to pump water
- Displace native plant communities
- Upset the balance of the aquatic environment.

The primary purpose of the EDCP is to control *Egeria* from continuing to grow and further impede navigation in Delta waterways. Through the EDCP, the DBW should clear and maintain adequate navigation channels for the various Delta users. The DBW will utilize control efforts that balance efficacy of *Egeria* control with potential environmental impacts to Delta waterways.

The DBW has the following nine (9) objectives for the EDCP:

1. Limit future growth and spread of *Egeria* in the Delta.
2. Improve boat and vessel navigation in the Delta.
3. Utilize the most efficacious methods available with the least environmental impacts.
4. Prioritize sites so EDCP activities are focused on sites with a high degree of infestation and navigational significance.
5. Employ a combination of control methods to allow maximum flexibility
6. Improve the EDCP as more information is available on control methods used in the Delta.
7. Monitor results of the EDCP to fully understand impacts of the EDCP on the environment.
8. Minimize EDCP control efforts, if sufficient efficacy of *Egeria* is realized.
9. Minimize use of methods that could cause adverse environmental impacts.

For the EDCP, the DBW will use a combination of chemical control methods and mechanical control methods to control *Egeria*. The DBW proposes the following registered aquatic herbicides, each labeled for *Egeria* control:

1. Reward® (diquat dibromide), EPA Registration Number 10182-404
2. Sonar® (fluridone ), including two forms -
   - Sonar® A.S. (liquid formulation), EPA Registration Number 67690-4
   - Sonar® SRP (granular formulation), EPA Registration Number 67690-3.

The DBW also will use mechanical harvesting as part of the EDCP, primarily for emergency use to gain immediate control of an area.

The DBW will conduct research trials using the copper-based herbicide Komeen. These Komeen trials are not considered part of the EDCP. Komeen is not an herbicide included in the five-year EDCP. Rather, because Komeen has potential significant and unavoidable environmental impacts, the DBW has elected to conduct a two-year limited research trial using Komeen to better understand its long-term impacts in the Delta.

Should the DBW find from the two-year Komeen trials that: 1) results provide sufficient evidence that Komeen meets the objectives of the EDCP and 2) the DBW could propose adequate mitigation measures to balance the potential significant and unavoidable environmental impacts of Komeen use in the Delta, the DBW would consider incorporating Komeen use into the ongoing EDCP. However, such a major program change would not occur without the DBW submitting supplemental environmental documentation to appropriate regulatory agencies.

The Delta contains approximately 50,000 surface acres of waterways, of which an estimated 3,909 surface acres of waterways, or 7.8 percent, are infested with *Egeria*. The DBW will focus control efforts on 1,710 surface acres at 35 priority sites over the first five-years of the EDCP. The DBW has preliminarily selected specific methods for each priority treatment site based upon current knowledge of each site. These methods are identified for each site in the project description (see Chapter 1 of the final EIR).

The DBW designed a flexible program that can be adjusted as new information is generated about the project's efficacy and/or impacts. The DBW believes that the appropriate foundation for the EDCP is an adaptive management strategy. The DBW will employ adaptive management where it continually seeks to improve the program as it gains more understanding about how the program is working.

Based on formal consultations with the USFWS following circulation of the draft EIR, in keeping with an adaptive management approach, the DBW modified its original project description to reflect the following approach for selecting and adjusting treatment sites and methods in the Delta:

- Propose to control the 35 sites identified in the project description, but expect to modify the list of 35 sites proposed in the project description over the five years. Such modifications would accommodate unforeseen changes in the degree or significance of infestation of currently designated low priority sites, or would target other not yet infested sites. The DBW would not be locked into the 35 sites proposed in the draft EIR.
- Propose to control each of the 35 sites with one treatment method for the EDCP (as identified in the project description of the draft EIR), but expect a potential need to use a different treatment method than was proposed for a given site. Such changes to treatment methods would be consistent with an adaptive management strategy for controlling *Egeria*. For example, a site originally proposed for Diquat treatment may be better suited for mechanically harvesting.